CLAIMS

What is claimed is:

1. A method for using available firmware flash ROM space as a diagnostic drive of a computer system that includes a central processing unit, a hard disk drive, a nonvolatile random access memory, an Extensible Firmware Interface (EFI), and a basic input and output system, the method comprising the steps of:

5 modifying the Extensible Firmware Interface to include an EFI driver that operates to configure available flash ROM space normally reserved for the BIOS as a diagnostic disk drive;

storing the modified Extensible Firmware Interface and the EFI driver in the nonvolatile random access memory;

10 when the computer system 10 is initialized, configuring the available space in the flash memory that is not allocated to the firmware as a diagnostic disk drive;

loading one or more diagnostic programs into the diagnostic disk drive;

selectively booting the computer system to the EFI command shell in the event of a problem with the computer system;

15 running the one or more diagnostic programs to correct the problem with the computer system; and

rebooting the computer system using the operating system on the hard disk drive.

2. The method recited in Claim 1 which comprises software.

3. The method recited in Claim 1 which comprises firmware.

4. The method recited in Claim 1 wherein the step of selectively running the diagnostic programs comprises displaying the diagnostic programs using an event viewer.

5. The method recited in Claim 1 further comprising the step of configuring the EFI driver to include data compression and decompression routines to increase the quantity of data stored in the diagnostic disk drive.

6. The method recited in Claim 1 further comprising the step of configuring the EFI driver to include encryption routines for security purposes.

7. The method recited in Claim 1 wherein the diagnostic disk drive space is used to store power on self test (POST) error logs in files that may be read and displayed.

8. The method recited in Claim 7 wherein the POST error logs in files are read by the operating system during its boot process and are displayed by an event viewer.

9. Computer apparatus comprising:
a central processing unit;
a nonvolatile random access memory;
an Extensible Firmware Interface (EFI);
5   a basic input and output system (BIOS) stored in the nonvolatile random access memory; and
an EFI driver stored in the nonvolatile random access memory that interfaces with the Extensible Firmware Interface, and operates to configure available flash read-only-memory space normally reserved for the BIOS as a diagnostic disk drive, load one
10   or more diagnostic programs into the diagnostic disk drive, selectively boot the computer system to the EFI command shell in the event of a problem with the hard disk drive, run the one or more diagnostic programs to correct the problem with the hard disk drive, and reboot the computer system using the operating system on the hard disk drive.

10. The computer apparatus recited in Claim 9 which further comprises an event viewer for displaying the diagnostic programs.

11. The computer apparatus recited in Claim 9 wherein the EFI driver includes data compression and decompression routines to increase the quantity of data stored in the diagnostic disk drive.

12. The computer apparatus 1 recited in Claim 9 wherein the EFI driver includes encryption routines for security purposes.

13. The computer apparatus recited in Claim 9 wherein the diagnostic disk drive space stores power on self test (POST) error logs in files that may be read and displayed.

14. The computer apparatus recited in Claim 13 wherein the POST error logs in files are read by the operating system during its boot process and are displayed by an event viewer.